Army Network Centric Operations and Warfare:
Putting Power to the Edge

LTG Steven W. Boutelle

CIO/G-6

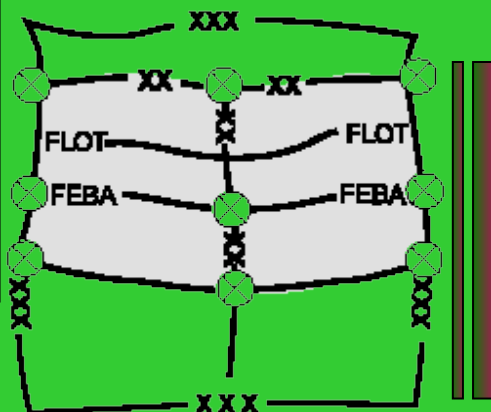*7 October 2003*

Evolving IT War Fight: A Changed Paradigm

Yesterday.....

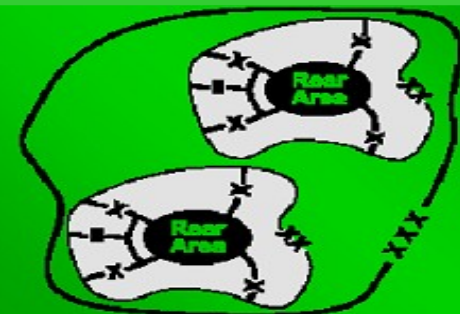### Contiguous Areas of Operations
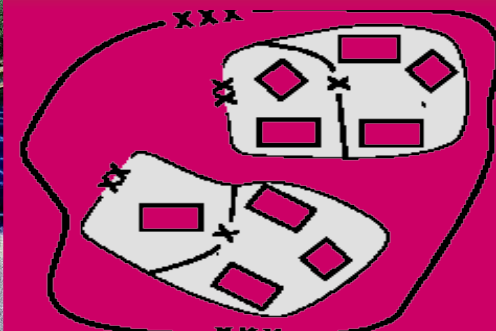
Linear Operations
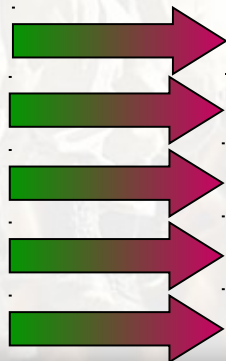
....Tomorrow

Linear Operations

Non-Contiguous Areas of Operations

Non-Linear Operations

- Area-Centric
- Low Data Demand
- Large Footprint
- Voice Reliant
- LOS Backbone

- Simultaneous Asymmetric Operations
- High Information Demand
- Embedded, Multi-Functional
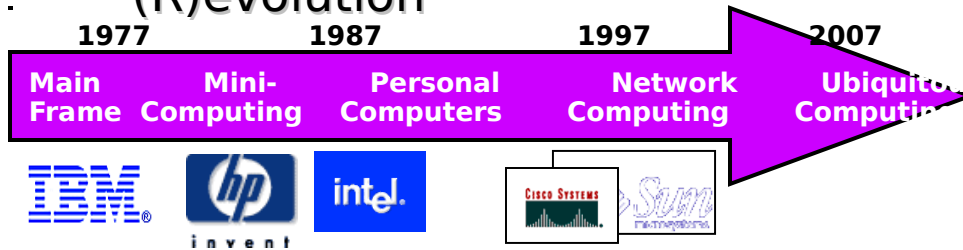- Collaboration Reliant
- Ubiquitous Transport

Driving the C4 Evolution

Emerging Strategic Environment

- Enhanced Nationalism & Rejection of the West
- Ungoverned groups – terrorism
- Readily available information technology
- Technological acceleration
- Unstable power balances

Information Age (R)evolution

1977	1987	1997	2007
Main Frame	**Mini-Computing**	**Personal Computers**	**Network Computing**	**Ubiquitous Computing**

IBM | hp invent | intel. | Cisco Systems | Sun

From 1989-1999, there were 38 US military deployments …..about once every 14 weeks

**Just Cause**   **Provide Comfort**

Allied Force

"The two truly transforming things, conceivably, might be in information technology and information operation and networking and connecting things in ways that they function totally differently than they had previously." - Secretary Rumsfeld, Aug 2001

Network-Centric Information Advantage

Information Quality
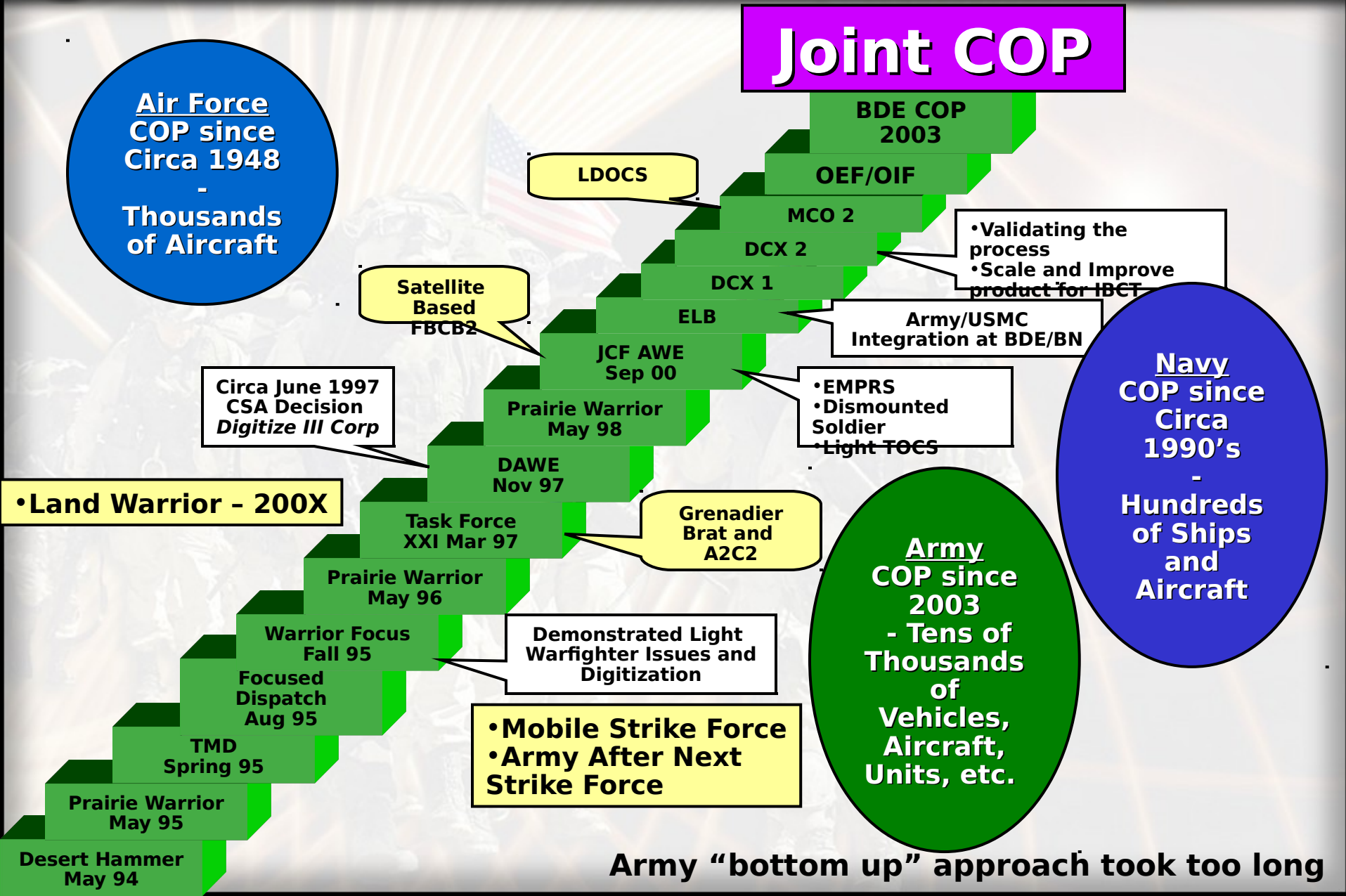- Content
- Accuracy
- Timeliness
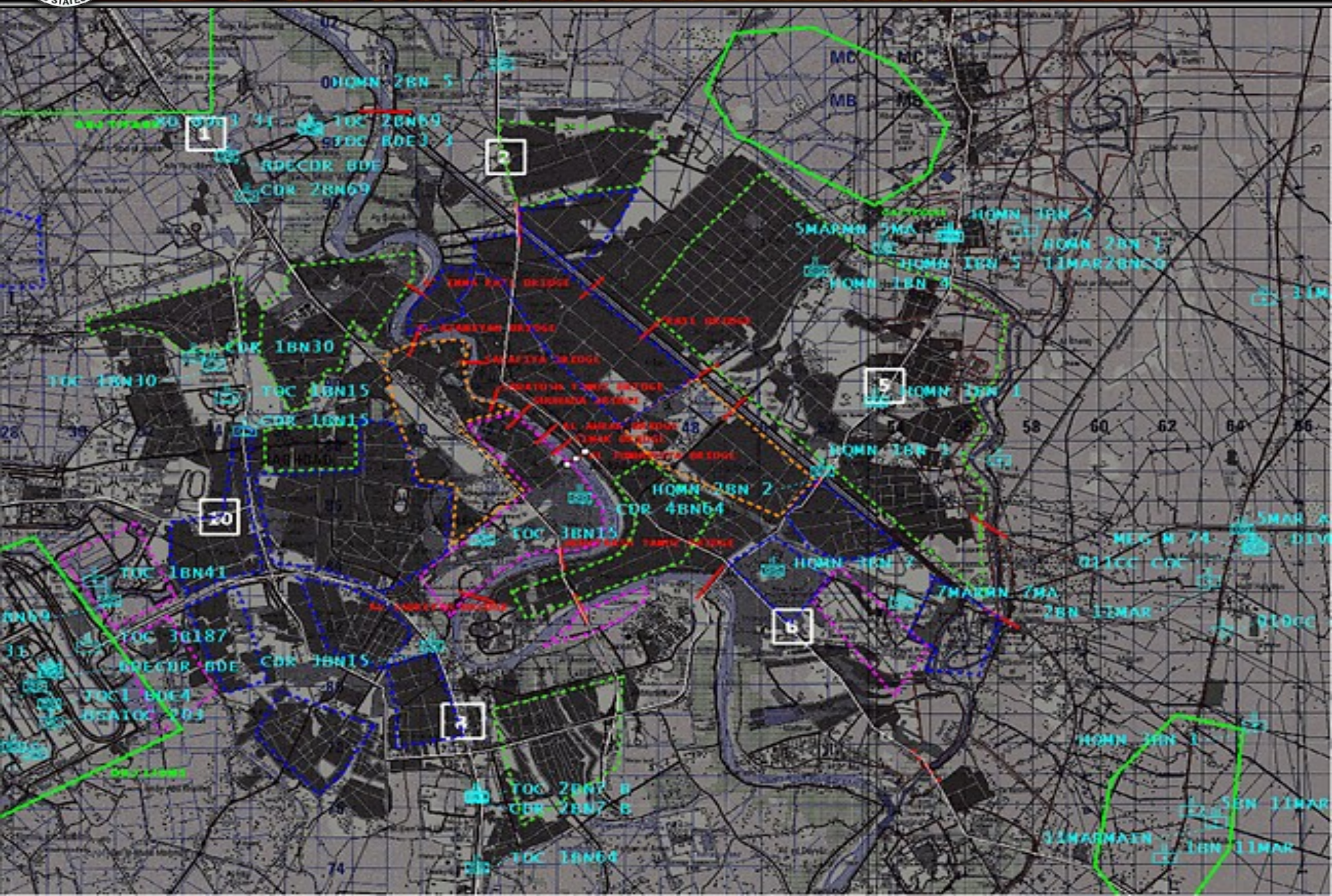- Relevance
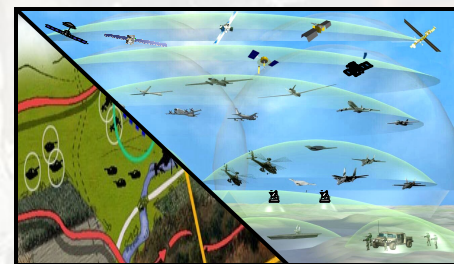
Network Centric Operations The Way Ahead

Local   Regional   Global

Exploiting Lessons Learned

Air Force COP since Circa 1948 - Thousands of Aircraft

Joint COP

BDE COP 2003

OEF/OIF

LDOCS

MCO 2

• Validating the process
• Scale and Improve product for IBCT

DCX 2

DCX 1

ELB

Army/USMC Integration at BDE/BN

Satellite Based FBCB2

JCF AWE Sep 00

Navy COP since Circa 1990's - Hundreds of Ships and Aircraft

Circa June 1997 CSA Decision *Digitize III Corp*

Prairie Warrior May 98

• EMPRS
• Dismounted Soldier
• Light TOCS

DAWE Nov 97

• Land Warrior – 200X

Task Force XXI Mar 97

Grenadier Brat and A2C2

Prairie Warrior May 96

Army COP since 2003 - Tens of Thousands of Vehicles, Aircraft, Units, etc.

Warrior Focus Fall 95

Demonstrated Light Warfighter Issues and Digitization

Focused Dispatch Aug 95

TMD Spring 95

• Mobile Strike Force
• Army After Next Strike Force

Prairie Warrior May 95

Desert Hammer May 94

Army "bottom up" approach took too long

Blue Force Tracking: *Part of the Network Centric Warfare Future*
101st Airborne -
101st MI Officer: *"BFT is saving our butts over here, comms-wise!"*

USMC -
USMC Division Forward Senior Watch Officer: *"Had it not been for BFT, we probably would have fired upon a friendly 3ID unit"*

CDR, TSG, USMC: *"We would die without this system"*

82nd Airborne –
1st BDE XO: *"FBCB2 is a winner! When all other means of communications failed, FBCB2 carried the day"*

3rd Infantry Division –
Night Shift Operations Officer, DMAIN: *"At the DMAIN on the move, FBCB2 was the only thing we had for SA"*

- **Reshape Signal Units**
  - Reshape people & equipment for relevancy
    – Joint Data Packages (eg. JCSE, SCAMPI)
  - Include satellite plan
  - Plan to "fix" tactical units for 5-7 years like OIF

- **Manage the Army's GIG contribution as an Enterprise: GuardNet (3300 Sites), ARNet (940 Sites), and Army Networks**
  - Realign and optimize for the Joint Warfighter

- **Network the Force, including Logistics**

- **Affect the acquisition of C4, empower AAIC for acquisition to ensure systems are Joint from birth**

- **Embrace small unit operations**

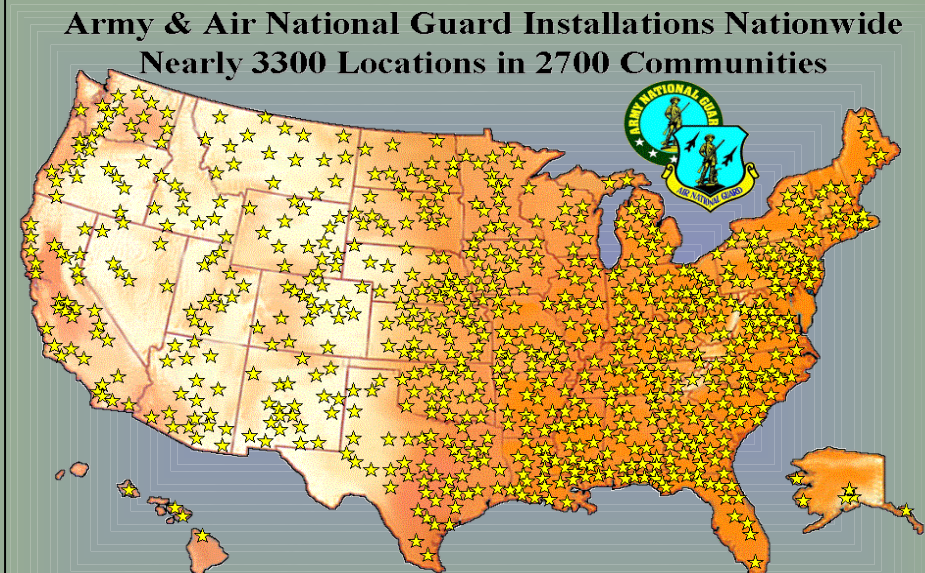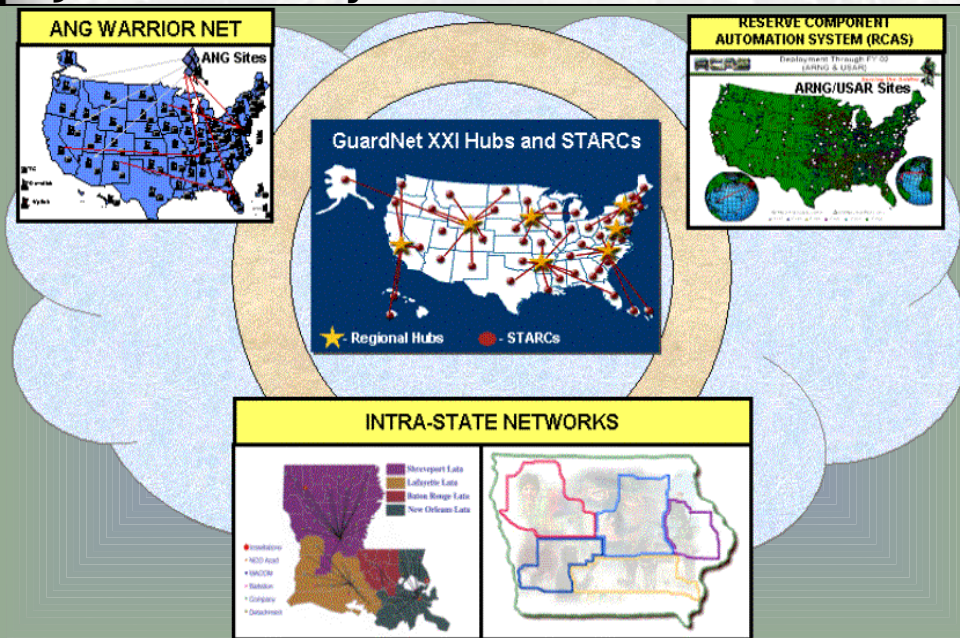- **Lead Army campaign for bandwidth Operations**

We will sustain/increase momentum with AKM and Current

- **Network consolidation – Single Enterprise Network**
  - **MOAs with USAR and NGB - one Army Enterprise Network**
  - **Acquisition and management under one element – NETCOM (Network Enterprise Technology Command)**
- **Merged Network Operations Security Centers (NOSCs) – NGB, USAR, and NETCOM - one multi-component network management construct**
  - **Positions Army to support HLS**
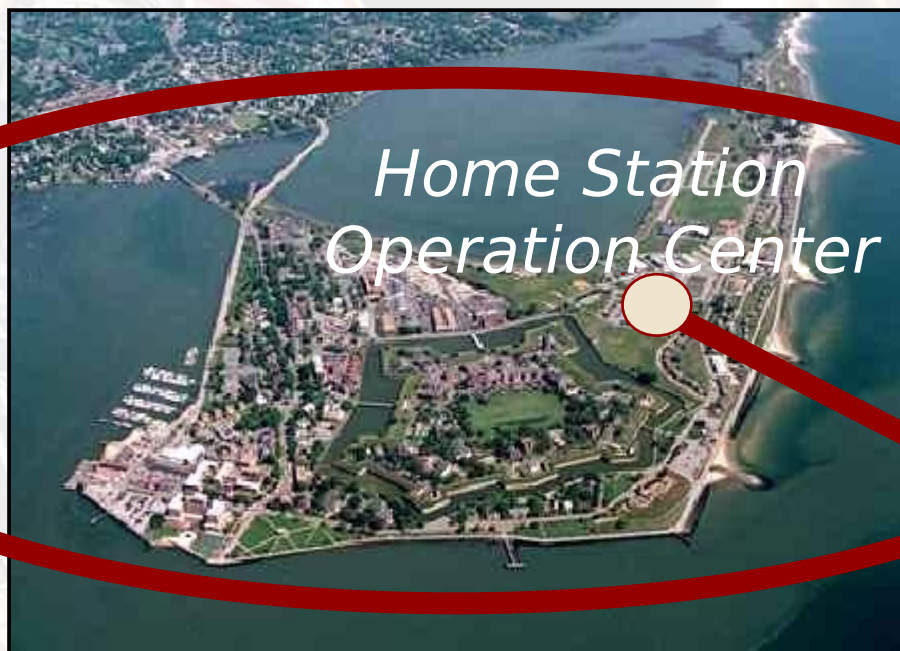
June 03 – Army CIO/G-6 is CIO for USAR

ANG WARRIOR NET
ANG Sites

GuardNet XXI Hubs and STARCs
★ - Regional Hubs ● - STARCs

RESERVE COMPONENT AUTOMATION SYSTEM (RCAS)
Deployment Through FY 03 (ARNG & USAR)
ARNG/USAR Sites

INTRA-STATE NETWORKS

Army & Air National Guard Installations Nationwide
Nearly 3300 Locations in 2700 Communities

Installation Information Infrastructure Modernization Program (I3MP)

Today

- Old Copper
- Analog, Aging Switches
- Limited Growth Ability

2003-2009

- Fiber or New Copper
- Latest Digital Switches
- Latest network equipment for high-speed data
- Upgrade Gateways to DISN/GIG-BE

Home Station Operation Center

Funding: $2.8B (Army)

- **Refining HSOC role with TRADOC**
- **I3MP locations being realigned**
- **Locations looked at WRT GIG-BE**
- **Today, only selected Buildings on selected installations**

We must fix the Last Mile to the Installation

Locations:
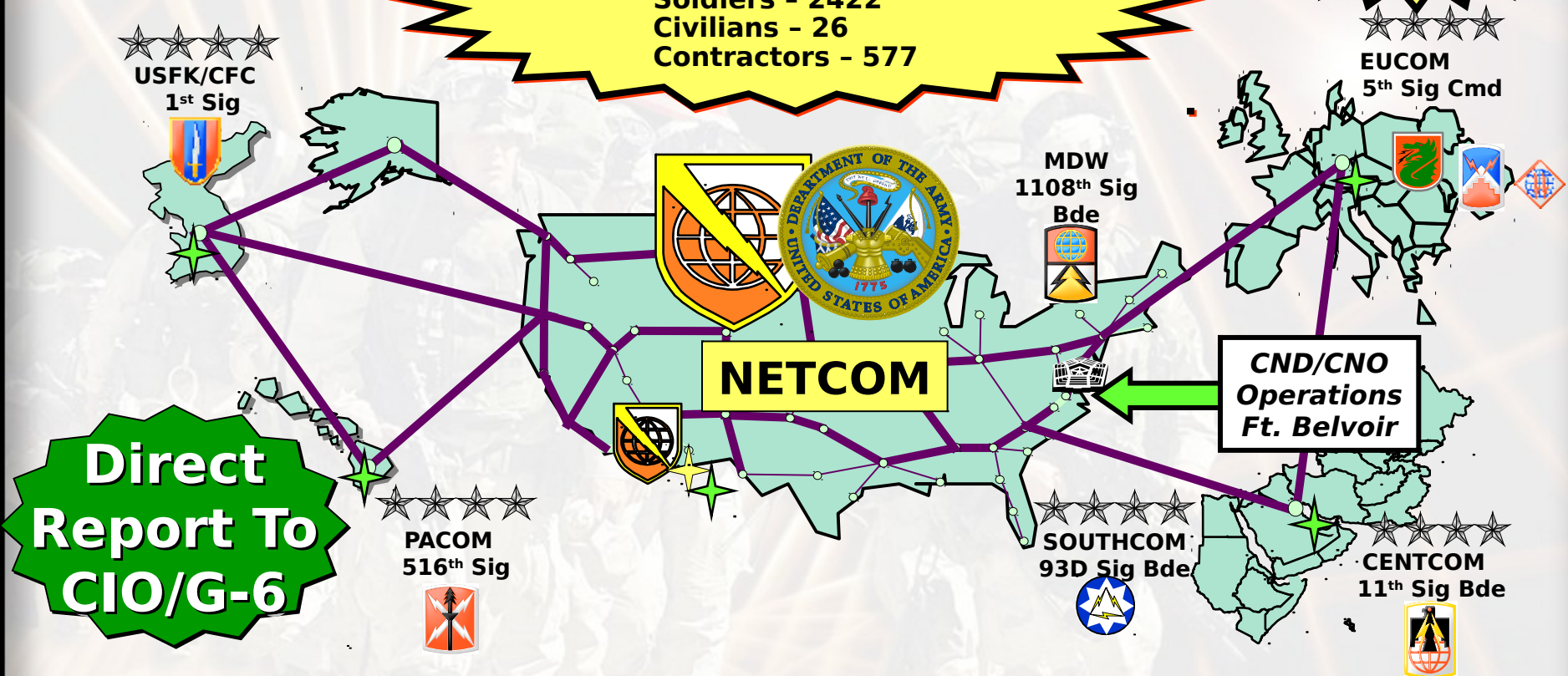**All Army installations including ARNG and Army Reserve**

Supporting the Warfighter

14,000 Soldiers/Civilians And Contractors

Daily operations - 300 Facilities In 14 Countries Worldwide

Currently Deployed In 21 Countries, 43 countries since 2002:
Soldiers – 2422
Civilians – 26
Contractors – 577

USFK/CFC
1st Sig

EUCOM
5th Sig Cmd

MDW
1108th Sig Bde

NETCOM

CND/CNO Operations Ft. Belvoir

Direct Report To CIO/G-6

PACOM
516th Sig

SOUTHCOM
93D Sig Bde

CENTCOM
11th Sig Bde

- **Single authority to operate, manage, and protect Army's Infostructure**
- ***Supporting Combatant Commanders World Wide***

ANOSC
TNOSC

Global Information Grid

Bandwidth Expansion

Information entered anywhere in the GIG

Operational Level

Joint, Interagency, & Multi-National Interoperability

Smart Data Pull

CORPS/DIV

Joint Data Net

. . . is available anywhere in the GIG

Global Hawk

Comanche

BDE

Predator

Common Relevant Operational Picture

WIN-Tactical Network

"Space to Mud"

Home Station Operations Center of Industrial Base

Tactical Radio Networks

Tactical Level
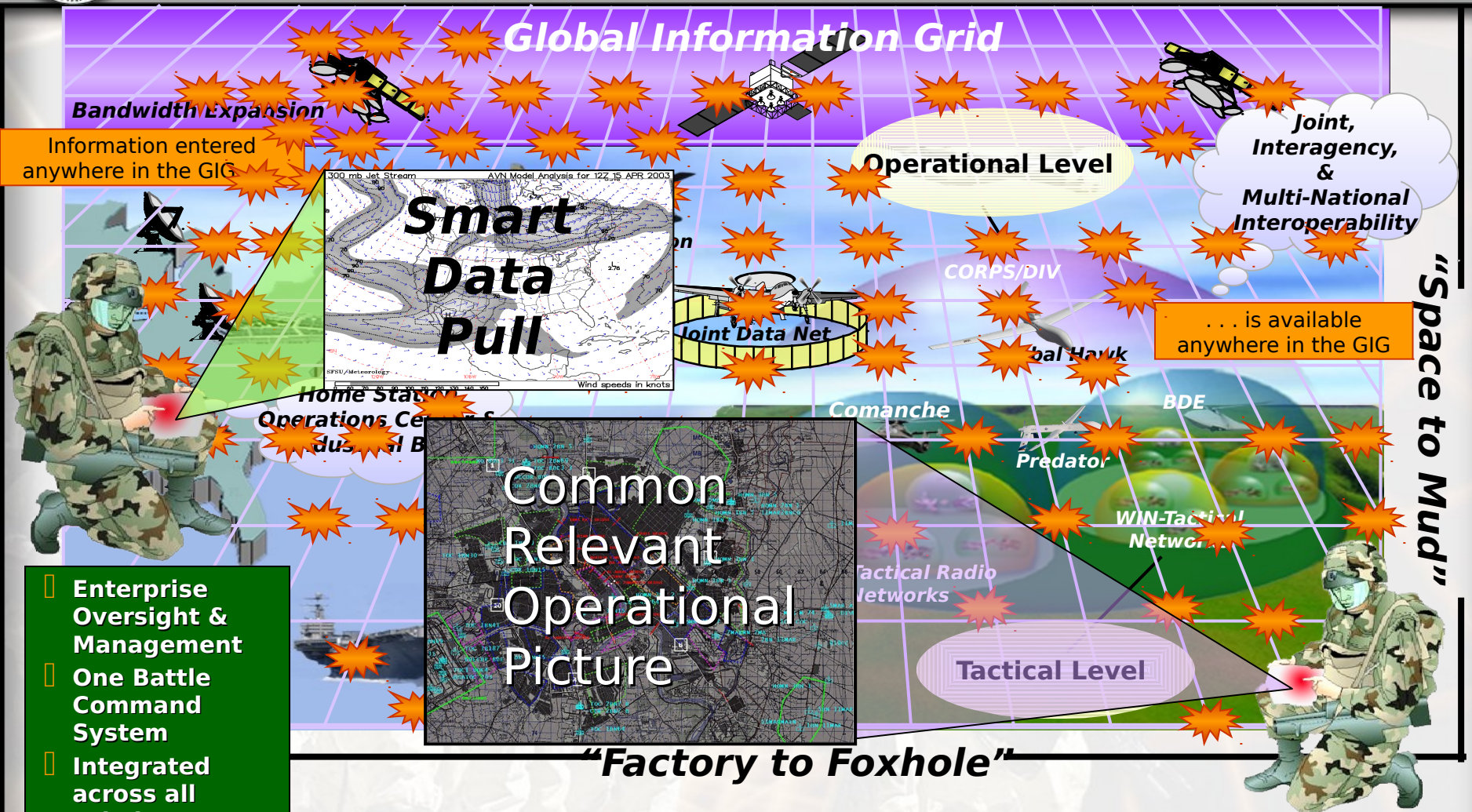
- Enterprise Oversight & Management
- One Battle Command System
- Integrated across all echelons
- Virtual Collaboration
- Reduce IT footprint
- Enterprise Knowledge

"Factory to Foxhole"

The Objective Force C4 architecture provides the framework for vertical & horizontal integration, specifies interfaces and relationships internal and external to the Army... Joint, Interagency, and Multi-National

11

This is Not Just About Technology

Global Terrorist Incidents
1968-1997 = 8509 (20 Years)
1997-2003 = 7053 (6 Years)

- Al Qaida
Islamic Jihad
- Hamas
- Hisbollah
- Palestine
Liberation Front
- Etc., Etc.

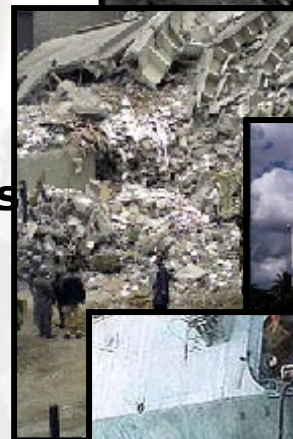- *Trained and Eduated – Phd's, Engineers, technicians*
- *Highly Dedicated*
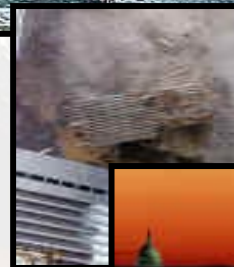
OCT 23, 1983
Marine Barracks
243 Marines killed

Aug 7 1998
U.S. Embassies
In East Africa
54 killed
5000 Injured

Oct 12, 2000
USS Cole
17 Sailors killed
39 Injured

Sept 11, 2001
WTC/Pentagon
3000+ killed
thousands more

Threat Level = **HIGH**

335 Terrorist Attacks Worldwide Since 9-11

Questions?

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CIO/G-6